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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,705

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EXAMINER

CERNOCH, STEVEN MICHAEL

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,705	<b>Applicant(s)</b> DORE, DAVID JAMES	
	<b>Examiner</b> STEVEN CERNOCH	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/11/2006</u> .   | 6) <input type="checkbox"/> Other: _____                          |

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gettinger et al. (US Pat No 5,570,840) in view of Moy et al. (US Pat No 6,328,233 B1).

Re claim 1, Gettinger et al. shows a mist-spraying apparatus for use in an enclosed space, the apparatus comprising an air-blowing means (Fig. 1, 26) with an outlet conduit (46) through which air can be blown into the enclosed space and an inlet conduit (68) through which air from within the enclosed space can be drawn for blowing through the outlet conduit to circulate within the space; a spraying means comprising a pump (24) for delivering liquid from a reservoir (16) to an atomizing nozzle (36) for spraying the liquid into the space in the form of an atomized mist; and a control means for controlling operation of the air-blowing means and the spraying means, said control means adapting to commence operation of the air-blowing means prior to operation of

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the atomizing nozzle and to continue operation of the air-blowing means after operation of the nozzle has ceased in order to continue circulation of the air and any atomized particles entrained therein around the space for a predetermined period of time (column 2, lines 60-64).

Gettinger et al. does not teach the atomizing nozzle being located within the outlet conduit so that atomized particles emitted by the atomizing nozzle are entrained in an air stream emitted by said air- blowing means and thereby distributed evenly throughout the space.

However, Moy et al. does teach the atomizing nozzle (Fig. 1, 28) being located within the outlet conduit (30) so that atomized particles emitted by the atomizing nozzle are entrained in an air stream emitted by said air- blowing means and thereby distributed evenly throughout the space.

Therefore it would have been obvious to one of ordinary skill in the art to have at the time of the invention the motivation to modify the apparatus of Gettinger et al. with the nozzles of Moy et al. so that it envelops the gaseous stream and the sprayed liquid (column 8, lines 1-2).

Re claim 2, Gettinger et al. does not teach wherein said atomizing nozzle is located centrally within said outlet conduit.

However, Moy et al. does teach wherein said atomizing nozzle (Fig. 1, 28) is located centrally within said outlet conduit (30).

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Therefore it would have been obvious to one of ordinary skill in the art to have at the time of the invention the motivation to modify the apparatus of Gettinger et al. with the nozzles of Moy et al. so that it envelops the gaseous stream and the sprayed liquid (column 8, lines 1-2).

Re claim 3, Gettinger et al. shows wherein said outlet conduit has a rectangular cross-sectional profile (Fig. 1, 46).

Re claim 4, Gettinger et al. shows wherein said outlet conduit defines a slot so that the air stream emitted into the space is formed of a slot-jet (Fig. 1, 44).

Re claim 5, Gettinger et al. does not show wherein said atomizing nozzle is inset within said outlet conduit.

However, Moy et al. does show wherein said atomizing nozzle (Fig. 1, 28) is inset within said outlet conduit (30).

Therefore it would have been obvious to one of ordinary skill in the art to have at the time of the invention the motivation to modify the apparatus of Gettinger et al. with the nozzles of Moy et al. so that it envelops the gaseous stream and the sprayed liquid (column 8, lines 1-2).

Re claim 6, Gettinger et al. discloses the claimed invention except for wherein a spraying tip of the atomizing nozzle is inset by at least 25 mm and by no more than 40 mm into said outlet conduit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to inset the nozzle into the outlet by at least 25 mm and by no more than 40 mm, since it has been held that discovering an optimum

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value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Re claim 9, Gettinger et al. discloses the claimed invention except for wherein said spraying means is adapted to spray at least 11 liters of liquid per hour at a pressure of  $7 \times 10^5$  N per  $\text{m}^2$  (7 bar). It would have been obvious to one having ordinary skill in the art at the time the invention was made to spray at least 11 liters at a pressure of  $7 \times 10^5$  N per  $\text{m}^2$  (7 bar), since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Re claim 12, Gettinger et al. shows wherein said reservoir contains a mixture of an oil and an aqueous solution (column 6, lines 20-22).

Re claim 13, Gettinger et al. discloses the claimed invention except for wherein said oil comprises monopropylene glycol or monoethylene glycol. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the oil comprise monopropylene glycol or monoethylene glycol, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Re claim 14, Gettinger et al. discloses the claimed invention except for wherein the mixture comprises less than 1 part oil to every 100 parts aqueous solution by volume. It would have been obvious to one having ordinary skill in the art at the time

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the invention was made to have the mixture comprise less than 1 part oil to every 100 parts aqueous solution since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gettinger et al. (US Pat No 5,570,840) in view of Moy et al. (US Pat No 6,328,233 B1) as applied to claim 1 above, and further in view of Herr et al. (US Pat No 6,488,219 B1).

Re claim 7, neither Gettinger et al. nor Moy et al. teach wherein the air-blowing means is provided with a source of steam whereby steam is additionally blown into the enclosed space via said outlet conduit.

However, Herr et al. does teach wherein the air-blowing means is provided with a source of steam whereby steam is additionally blown into the enclosed space via said outlet conduit (column 2, line 26).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the apparatus of Gettinger et al. with the steam of Herr et al. as it would be obvious to try.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gettinger et al. (US Pat No 5,570,840) in view of Moy et al. (US Pat No 6,328,233 B1) as applied to claim 1 above, and further in view of Fuchs et al. (US Pat No 5,147,087).

Re claim 8, neither Gettinger et al. nor Moy et al. show wherein said atomizing nozzle comprises a 60° solid cone nozzle.



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However, Fuchs et al. does teach wherein said atomizing nozzle comprises a 60° solid cone nozzle (column 8, line 60).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the apparatus of Gettinger et al. with the nozzle of Fuchs et al. to function on the requirements to be made on the medium to be processed (column 8, lines 63-64).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gettinger et al. (US Pat No 5,570,840) in view of Moy et al. (US Pat No 6,328,233 B1) as applied to claim 1 above, and further in view of Nishi et al. (US Pat No 5,060,864).

Re claim 10, neither Gettinger et al. nor Moy et al. show wherein said air- blowing means comprises a cylindrical fan.

However, Nishi et al. does teach a fan (column 16, line 57).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the apparatus of Gettinger et al. with the fan of Nishi et al. to pressurize the liquid in the chamber (column 17, lines 5-6).

Re claim 11, neither Gettinger et al. nor Moy et al. show being located in proximity to a ceiling at a top of a wall of the enclosed space.

However, Nishi et al. shows being located in proximity to a ceiling at a top of a wall of the enclosed space (Fig. 23, 265 and 280).

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Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have the motivation to modify the apparatus of Gettinger et al. with the proximity of Nishi et al. to be most affective.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEVEN CERNOCH whose telephone number is (571)270-3540. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571)272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/S. C./

Examiner, Art Unit 3752

/Len Tran/

Supervisory Patent Examiner, Art Unit 3752